Multimodal instructions. A descriptive linguistic analysis

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Background

During the past two decades, the emergence of new technologies has created new possibilities for an increasingly multimodal presentation of technical information and instructions. Recent developments in web 2.0 technologies have resulted in a vast array of possibilities ranging from the integration of moving images (e.g. instruction movies and animations) and sound (e.g. spoken text, music, and warning signals) to interactivity and virtual reality (e.g. 3D visualizations) (van Bart & Steehouder 2008: 213). Text, image, and sound represent different modes or semiotic resources of communication. Modern information products are multimodal, since they generally make use of a range of means of expression (van Leeuwen & Kress 2011: 123). For example, in technical instructions writing is typically associated with layout, typography and visual illustrations. Given that emerging genres such as video-assisted instructions incorporate traditional ones such as written text and appropriate features from them (Norrick 2011), the relation and interaction between the various semiotic modes is a challenging phenomenon, which opens up interesting perspectives on how multimodality is addressed in (technical) communication.

Objectives

In this study we aim at a linguistic analysis of instructive discourse across different modes. More specifically, we focus on the communicative functions and action-oriented goals that are tied to and fulfilled by (a combination of) different semiotic modes (Bucher 2013: 63 f.). We examine in greater detail the specific communicative potential of the specific modes in order to describe how the communicative functions are realized in both text-based and web-based output formats.

On a granular level, this analysis provides insights into similarities and differences between the specific modes in which instructive discourse nowadays is presented as well as a better understanding of their common properties and potentials (van Leeuwen & Kress 2011: 108). On a more general level, we want to point out how technical communication can benefit from linguistic discourse studies in multimodality in helping to determine which presentation mode to choose for a given purpose and communicative situation.

Research questions

We start from a functional and usage-oriented perspective on multimodality in describing instructive texts whereby we focus on specific aspects of their internal organization. We address the following questions:

- How are semiotic resources used to express instructions in technical texts?
- Which communicative purposes do they fulfil?
- Which intermodal relations can be observed?
- What is the relation between the movie instruction and the written instruction? More specifically, how is the linear written instruction integrated into or complemented by the nonlinear audio-visual presentation format?

– How is coherence established in nonlinear multimodal communication forms?

Methodology

We adopt an exploratory multimodal discourse analysis taking movie instructions as an example and comparing them with their more traditional, i.e. textual counterparts. More specifically, we look at how verbal (e.g. wordings for openings and closings, deictic expressions, verb tenses and mood), paraverbal (e.g. intonation, stress), and nonverbal types of information (e.g. eye-gaze, gesture, graphics) are utilized as mutually interdependent modes that exist in perpetual interaction.

Our corpus consists of five cooking instructions, five medical patient instructions, and five technical user instructions, all of which are in German. Most of them are available both in text and in video format, hence presenting instructions in a variety of genres and (combinations of) modes (e.g. vision) and submodes (e.g. picture, animation, pictogram, arrow, symbol, screenshot, logo). In view of their task-oriented character, we can expect the above genres to draw on similar types of *discourses* (i.e. they all deal with instructive content), but use a different *design* (i.e. a template or a schema) and different forms of *production* (i.e. the material semiotic realisation). We therefore assume that typical semiotic patterns can be identified that are linked to specific communicative purposes.

Provisional results

The corpus analysis has revealed that the technical video instructions under examination attend to a rich variety of (combined) semiotic modes to fulfil several communicative purposes:

– All video instructions assist users in a performing a task, which is generally described at the beginning of the video as either “easy/easier” or “fast” (e.g. “Ganz einfach – ganz schnell”, “in nur 15 Sekunden”). This can be seen as a kind of *motivational appeal* for the user to watch the video. Interestingly however, two instruction videos explicitly state the complexity of the task at hand, or question its simplicity, thus employing a different motivational strategy and demonstrating the relevance and usefulness of the instruction.
– About one third of the movie instructions stands in direct relation to its written version, which is “explicitly invoked as authoritative” (Norrick 2011: 2740-2741). As part of an expert footing, the speaker positions himself as an expert, and explicit reference to the written version is a part of this positioning (Norrick 2011: 2749): e.g. “Bitte lesen Sie in jedem Fall auch die Gebrauchsanweisung”. Expert footing is also instantiated when explicit reference is made to a physician or pharmacist (medical instructions) or a service centre (technical instructions).
– Movie instructions are communicated such that they create as small a distance as possible between speaker and viewer in order to guarantee maximal attention and (emotional) involvement on the part of the viewer. This is realised *verbally* by means of (i) the 2nd person imperative mood, (ii) the 1st person plural inclusive *wir* in the present tense, (iii) direct address of the audience (formal or informal pronouns, salutation and closing phrases, asking for feedback), (iv) verbalized physical pointing with deictic and anaphoric expressions, and (v) the appearance of written text in the video. Among the *paraverbal* means are intonation, tone of voice, and word stress, which are commonly used to signal key actions that the viewer should perform in order to carry out the instruction. *Nonverbal* resources reducing the distance between speaker and viewer include sounds (music, realistic sounds, and designed sounds) and visuals such as camera zoom-ins (medium shots and close-ups), pictograms, and in the case of a human narrator, pointing hand gestures as well as eye contact with the viewer. Compared to a human performer, animated figures in technical and medical instructions are less personal and hence create more distance. The screenshots typically used in software instructions are similar in this respect.
– Finally, movie instructions are embedded into narrative and marketing discourse. Whereas marketing elements are used to promote the product, company or brand, narrative elements are

used to evaluate the task and to provide background information to it. They also establish coherence in that they offer a basic structure that includes a beginning (conditions), a middle part (actions), and an end (results). Alternatively, a question-answer structure is employed. Narrative discourse is typically in the 1st person singular present tense indicative. Instructive discourse is typically characterized by a shift in mood and person (2nd person imperative) (see also Norrick 2011). Coherence is further enhanced by means of discourse (e.g. *so*), temporal (e.g. *nun*, *danach, an-/abschließend*) and graphic markers (e.g. numbers), which express a set of sequentially ordered instructions in spoken text in accordance with the basic pattern for written instructions. Short pauses between the steps should facilitate processing of information.

Practical implications

Are semiotically rich audio-visual presentation formats more user-friendly than their traditional counterparts with a focus on written instructions? From a practical point of view, integrated tech materials that contain both a written, textual version and a corresponding audio-visual performance by a good narrator seem to be preferable –assuming that they fit the communicative purpose at hand. Previous research (Mayer 2005 in Van der Meij & Van der Meij 2013) has demonstrated that the combination of moving images and spoken words is an optimal form of multimedia usage: the processing of instructions takes less cognitive effort if (i) the user is presented with several information channels (viz. visual and verbal modes) and (ii) the information is complemented, not repeated. Moreover, users have shown to be more motivated and said that they had learned and remembered more skills. Movie instructions have proven useful to introduce new products or new features of products as well as to illustrate "advanced technique[s] that [are] difficult to describe in written form" (Samuels 2013).

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